FORM PTO-1390 REV. 5-93	US DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEYS DOCKET NUMBER **P00,1834**
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		U.S.APPLICATION NO. (if known, see 37 CFR 1.5) **09/673905**

INTERNATIONAL APPLICATION NO. **PCT/EP98/02775**	INTERNATIONAL FILING DATE 12 May 1998	PRIORITY DATE CLAIMED 22 April 1998

TITLE OF INVENTION
"SIGNALLING SYSTEM IN A SIGNALLING POINT"

APPLICANT(S) FOR DO/EO/US
Klaus GRADISCHNIG

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay.
4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.

5. ☒ A copy of International Application as filed (35 U.S.C. 371(c)(2))
   a. ☒ is transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☐ has been transmitted by the International Bureau.
   c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US)
6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2).

7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. §371(c)(3))
   a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☐ have been transmitted by the International Bureau.
   c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
   d. ☒ have not been made and will not be made.

8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).

9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).)

10. ☒ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C.371(c)(5)).

Items 11. to 16. below concern other document(s) or information included:
11. ☒ An Information Disclosure Statement under 37 C.F.R. 1.97 and 1.98; (PTO 1449, Prior Art, Search Report).

12. ☒ An assignment document for recording. A separate cover sheet in compliance with 37 C.F.R. 3.28 and 3.31 is included.
   (SEE ATTACHED ENVELOPE)

13. ☒ A FIRST preliminary amendment.
    ☐ A SECOND or SUBSEQUENT preliminary amendment.

14. ☐ A substitute specification.

15. ☐ A change of power of attorney and/or address letter.

16. ☒ Other items or information:
   a. ☒ Submittal of Drawings
   b. ☒ **EXPRESS MAIL #EJ 077703907US, dated October 23, 2000.**

U.S.APPLICATION NO. (if known, see 37 C.F.R. 1.5) 09/673905	INTERNATIONAL APPLICATION NO. PCT/EP98/02775	ATTORNEY'S DOCKET NUMBER P00,1834

17. ☒ The following fees are submitted:

	CALCULATIONS	PTO USE ONLY

BASIC NATIONAL FEE (37 C.F.R. 1.492(a)(1)-(5):

Search Report has been prepared by the EPO or JPO $860.00

International preliminary examination fee paid to USPTO (37 C.F.R. 1.482) . . $700.00

No international preliminary examination fee paid to USPTO (37 C.F.R. 1.482) but international search fee paid to USPTO (37 C.F.R. 1.445(a)(2) $770.00

Neither international preliminary examination fee (37 C.F.R. 1.482) nor international search fee (37 C.F.R. 1.445(a)(2) paid to USPTO $1040.00

International preliminary examination fee paid to USPTO (37 C.F.R. 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4) . . . . $ 96.00

ENTER APPROPRIATE BASIC FEE AMOUNT =	$ 860.00	

Surcharge of $130.00 for furnishing the oath or declaration later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 C.F.R. 1.492(e)). — $

Claims	Number Filed	Number Extra	Rate		
Total Claims	10 - 20 =		X $ 18.00	$ .00	
Independent Claims	2 - 3 =		X $ 80.00	$ .00	
Multiple Dependent Claims			$270.00 +	$	
TOTAL OF ABOVE CALCULATIONS =				$ 860.00	

Reduction by 1/2 for filing by small entity, if applicable. Verified Small Entity statement must also be filed. (Note 37 C.F.R. 1.9, 1.27, 1.28) — $

SUBTOTAL =	$ 860.00	

Processing fee of $130.00 for furnishing the English translation later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492(f)). + — $

TOTAL NATIONAL FEE =	$ 860.00	

Fee for recording the enclosed assignment (37 C.F.R. 1.21(h). The assignment must be accompanied by an appropriate cover sheet (37 C.F.R. 3.28, 3.31). $40.00 per property +

TOTAL FEES ENCLOSED =	$ 860.00	
	Amount to be refunded	$
	charged	$

a. ☒ A check in the amount of $ 860.00 to cover the above fees is enclosed.

b. ☐ Please charge my Deposit Account No. _____ in the amount of $ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. **501519**. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 C.F.R. 1.494 or 1.495 has not been met, a petition to revive (37 C.F.R. 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

Schiff Hardin & Waite
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SIGNATURE

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31,870
Registration Number

IN THE UNITED STATES ELECTED OFFICE
OF THE UNITED STATES PATENT AND TRADEMARK OFFICE
UNDER THE PATENT COOPERATION TREATY-CHAPTER II

"PRELIMINARY AMENDMENT"

5   APPLICANT: Klaus GRADISCHNIG

SERIAL NO.:   EXAMINER:

FILING DATE: ART UNIT:

INTERNATIONAL APPLICATION NO.: PCT/EP98/02775

INTERNATIONAL FILING DATE: 12 May 1998

10   INVENTION: SIGNALLING SYSTEM IN A SIGNALLING POINT

Hon. Assistant Commissioner for Patents
        Box PCT
        Washington D.C. 20231

SIR:

15   Amend the above-identified international application before entry into the

national stage before the U.S. Patent & Trademark Office under 35 U.S.C. §371

as follows:

IN THE SPECIFICATION

        On page 1, before the title, insert --

20   S P E C I F I C A T I O N
                            TITLE--;

        after the title, insert --

                BACKGROUND OF THE INVENTION

Field of the Invention

  The present invention is related generally to a signalling system and in particular to an apparatus and method in by which a signalling point communicates with itself using loops.--;

5 before line 2, insert --

Description of the Related Art--;

  after line 22, insert --

      SUMMARY OF THE INVENTION--;

  in line 25, delete "a system according to claim 1." and insert --a signalling

10 means for processing signalling messages, including links via which the signalling means is connected to other signalling means, at least one signalling system that sends signalling messages to other signal means or, respectively, receives signalling messages from these via said links, a signalling system that respectively allocates a signalling network identity to a link; and at least one link that is

15 returned in a loop from the signalling point to the same signalling point, what is referred to as a loop link, whereby different signalling network identities are allocated to the loop link at the output and input side by the signalling system.--;

  after line 25, insert --

    BRIEF DESCRIPTION OF THE DRAWINGS

20 Figure 1 is a schematic diagram which shows an embodiment of the invention for the interworking in a signalling point;

  Figure 2 is a schematic diagram which shows an embodiment of the invention for the load generation;

  Figure 3 shows routing tables in the point codes X, 1 and 3 belonging to

25 the embodiment in Figure 2, i.e. in the different networks of the signalling point supported by the system;

Figure 4 is a block diagram which shows an embodiment of the invention for the interworking in combined broadband and narrowband systems;

Figure 5 is a schematic diagram which shows an embodiment of the invention wherein an operator offers inter-network STP services to a number of other network operators; and

Figure 6 shows routing tables belonging to the embodiment in Figure 5.--;

after line 27, insert --

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS--.

On page 2, in line 1, delete "said" and insert --the--.

On page 3, in line 1, delete "Said" and insert --The--;

in line 10, delete "[sic]"; and

in line 15, delete "said" and insert --the--.

On page 4, in line 26, delete "[sic]".

On page 5, in line 4, delete "[!!!!!!!!!!]";

in line 16, before "primary" insert --a--; and

after line 22, add the following new paragraph --

Although other modifications and changes may be suggested by those skilled in the art, it is the intention of the inventors to embody within the patent warranted hereon all changes and modifications as reasonably and properly come within the scope of their contribution to the art.--.

IN THE CLAIMS

On substitute page 6, line 1, change "New Patent Claims" to --I Claim:--.

Amend claim 1 as follows:

1. (Amended) [Signalling means] <u>A signalling apparatus</u> for processing

2   signalling messages, comprising

--   links via which the signalling [means] <u>apparatus</u> is connected to other

4   signalling [means] <u>apparatus,</u>

--   at least one signalling system that sends signalling messages to <u>the</u> other

6   signal [means] <u>apparatus</u> or, respectively, receives signalling messages

from <u>the other signalling apparatus</u> [these] via said links,

8   [characterized by]

--   [a] <u>said</u> signalling system that respectively allocates a signalling network

10   identity to <u>said links</u> [a link];

--   at least one <u>of said</u> link<u>s</u> that is returned in a loop from [the] <u>a</u> signalling

12   point to the [same] signalling point[, what is referred to] as a loop link,

[whereby] different signalling network identities <u>being</u> [are] allocated to

14   the loop link at [the] <u>an</u> output and input side by the signalling system.

2.(Amended) [Signalling means] <u>A signalling apparatus</u> according to

2   claim 1, [characterized in that] <u>wherein</u> said signalling system, with [the]

assistance of a said loop link[,] communicates signalling messages between two

4   other signalling systems contained in the signalling [means] to which is

respectively <u>provided</u> [comprises] an interface.

3.(Amended) [Signalling means] <u>A signalling apparatus</u> according to

2   claim 1, [characterized in that] <u>wherein</u> said signalling system generates internal

load for test purposes with [the] assistance of [at least one] said loop link.

4.(Amended) [Signalling means] <u>A signalling apparatus</u> according to

2   claim 1, <u>wherein</u> [characterized in that] said signalling system realizes an

interworking [Internetworking *[sic]*] <u>communication</u> with other networks with

4   [the] assistance of a said loop link.

5.(Amended) [Signalling means] <u>A signalling apparatus</u> according to [one

2   of the claims] <u>claim</u> 1 [through 4], <u>wherein</u> [characterized in that] said signalling

system is a signalling system according to No. 7 and allocates [the] <u>a</u> same

4   network identifier [(NI)] to said loop link at the output and input side.

6.(Amended) [Method] <u>A method</u> for signalling in a signalling means,

2   <u>comprising the steps of:</u> [in accord wherewith]

    --   [a signalling system of the signalling means allocates] <u>allocating</u> signalling

4   network identities to [the] links of [the] <u>a</u> signalling [means] <u>apparatus by</u>

    <u>a signalling system</u>;

6   --   [the signalling system allocates] <u>allocating</u> different signalling network

identities at [the] <u>an</u> output and input side to a link[, what is referred to] as

8   [the] <u>a</u> loop link[,] that is returned from the signalling <u>apparatus</u> [means] to

[the] <u>a</u> same signalling means in a loop.

7.(Amended) [Method] <u>A method</u> according to claim 6, <u>further comprising</u>

2   <u>the steps of: employing</u> [characterized in that a] said loop link [is employed] by

said signalling system [in order] to communicate signalling messages between

4   two further signalling systems of the signalling means <u>having</u> [to which it

comprises] a respective interface.

8.(Amended) [Method] <u>A method</u> according to claim 6, <u>further comprising</u>

2   <u>the step of: employing</u> [characterized in that a] said loop link [is employed] by

said signalling system to generate load for test purposes.

9.(Amended) [Method] <u>A method</u> according to claim 6, <u>further comprising</u>

2   <u>the steps of: employing</u> [characterized in that a] said loop link [is employed] by

said signalling [in order] to enable [a desired Internetworking [sic]] with other

4   networks [for a network].

10.(Amended) [Method] <u>A method</u> according to [one of the claims] <u>claim</u>

2   6 [through 9], <u>further comprising the steps of:</u> [characterized in that a common NI

is allocated] to [a] said loop link at [the] <u>an</u> output and input side by said

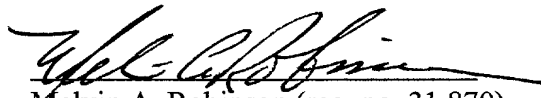4   signalling system.

IN THE ABSTRACT

Delete lines 2 and 8.

REMARKS

The foregoing amendments to the specification and claims under Article

41 of the Patent Cooperation Treaty place the application into a form for

prosecution before the U.S. Patent and Trademark Office under 35 U.S.C. §371.

Accordingly, entry of these amendments before examination on the merits is hereby requested.

Respectfully submitted,

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ATTORNEY FOR APPLICANT

SIGNALLING SYSTEM IN A SIGNALLING POINT

In channel-related signalling systems, for example in the signalling system R5, it is possible that a signalling point communicates or, respectively, sets up a connection with itself via a payload channel loop. This is not possible in the

5   signalling system ZGS7 (see below). However, such loops are advantageous for solving a number of problems. For the interworking of different signalling systems, it is a critical simplification in the realization when all signalling systems interwork with a selected signalling system and not each with each. Further, such loops are advantageous in order to be able to test systems with high traffic. Finally, monitors

10   can be attached to such loops. Different traffic flows can then be supplied for observation on the basis of purely administrative measures (without hardware re-strapping).

     In ZGS7, a signalling point is identified by an address, what is referred to as the signalling point code. The level 3 of the message transfer parts cannot send a

15   message to its own signalling point code or, respectively, cannot receive a message from itself. Certain users of the message transfer part, for example TUP and ISUP, can also normally not send channel-related messages to themselves, even if the message transfer part were to enable this. In order to nonetheless enable such loops, specific methods have been implemented that are essentially comprised therein that

20   specific signalling channels form loops on which destination and/or sender address are inverted/complemented. Similar, user-specific modifications must be potentially implemented for users.

     The invention is based on the object or enabling loop formation without said disadvantages.

25   This object is achieved by a system according to claim 1.

     The invention is explained in greater detail below with the assistance of the drawing, whereby the drawing comprises six Figures.

     In ZGS7, a network is identified by what is referred to as a network indicator (NI) that is contained in the messages. 2 bits for the NI are reserved in the

30   messages; up to four networks can thus been distinguished from one another in a node

(said networks can, for example, be a matter of the signalling networks of communication networks of different operators or different technologies (for example, broadband or narrowband) as well as a matter of national or, respectively, international signalling networks). Since a signalling link normally belongs to only one network, however, the perception has prevailed that allocating individual links to specific networks suffices for distinguishing the network. The NI is thus no longer required as a distinguishing feature.

In fact, there are communication systems that support more than four signalling networks (for example, 8 or 32), for example the EWSD system of Siemens AG, or such systems are being planned. A network identity is thereby internally allocated to each signalling link and an NI is externally allocated to each internal network identity. Networks with different internal identity can thereby definitely use the same external NI. Each (internal) network is thereby completely separated from the other networks.

This concept, what is referred to as the multiple network concept, is then employed for operating loops in ZGS7 without requiring additional development. The signalling system in a signalling point is identified in two (internal) networks by different point codes. These two networks can then be unproblematically connected to one another by signalling links. When a check of the incoming NI for correctness is implemented in the system or, respectively, in at least one of the two networks to be interworked with one another, then the same external NI must also be allocated to the two internal networks. Note: when there is no mapping of incoming linkset onto NI and different networks must be monitored by a single, shared network entity (protocol realization), the NI therefor must be taken to identify the "responsible" network (the applicable routing table). Without a check, for example, it is thereby possible that a message from one network is illegally forwarded into another network due to the employment of an incorrect NI, which can lead to disadvantageous behavior in the other network (this could be referred to as *uncontrolled* tunneling since it is externally triggered and can no longer be controlled in the node).

Said arrangement is referred to below as network or, respectively, signalling tunnel. Embodiments of the invention are explained in greater detail below.

Figure 1 shows an embodiment of the invention for the interworking in a

5   signalling point.

An ISUP is located both in the internal network 1 as well as 2. Externally, the two networks use the same NI but different point codes. A call between R1 and R2 is routed via the ISUP loop. It suffices for this purpose to correspondingly configure the ZGS7 routing tables in both networks as well as the routing tables for

10   the call processing (R1 and R2 in ISUP) and to accomplish [sic] the necessary trunks and signalling tunnels for the ISUP loop.

An interworking is realized between CCITT signalling system R1 and ISUP as well as between CCITT signalling system R2 and ISUP but not between R1 and R2. A call that is supposed to run from R1 to R2 is first handed over outgoing to

15   the ISUP by the call processing, said ISUP routing the MSU belonging to this connection setup via the signalling tunnel to the ISUP of the other network. Coming from R1, thus, the call is thus first handed over to the ISUP in network 1. Using the called party address signalled by R1, the ISUP determines the next destination with the appertaining DPC (DPC=9), enters this DPC into the MSUs and then hands over

20   these MSUs to the MTP of ZGS7. The MTP takes the DPC from the MSUs and, on the basis of its routing table for network 1, determines the link (a loop link) therefrom via which it further-routes the MSU. The ISUP in network 2 receives the MSUs from the MTP and in turn hands over the MSUs and, thus, the call to the call processing. On the basis of its routing table, the call processing then determines that the call is

25   forwarded via R2.

Figure 2 shows an embodiment of the invention for the load generation.

Figure 3 shows routing tables in the point codes X, 1 and 3 belonging to the embodiment in Figure 2, i.e. in the different networks of the signalling point supported by the system.

30   For example, 6 networks are established in the system and cyclically connected to one another by network tunnels. Two networks (networks 2 and 3 here)

are also connected to a protocol test device that emulates a point code (X and Y here) in each of the two networks. All networks employ the same NI.

These routing tables in the networks in the system are configured such that network 3 routes MSUs that contain a destination point code PC=X to network 4, and network 4 routes them farther to network 5, etc. The routing tables are analogously configured in the opposite direction for PC=Y. A message generated by the test device is thus routed through the system six times, as a result whereof high system loads can be generated with relatively simple test devices. Further variations of this application are the incorporation of the users (for example, ISUP) or, on the other hand, completely closed loops wherein MSUs constantly circulate.

Figure 4 shows an embodiment of the invention for the interworking in combined broadband and narrowband systems.

The SSNC is the shared MTP platform in the EWSD broadband node. B-ISUP is located only in the EWSX part, N-ISUP in the EWSD and EWSX. In order to enable an NNI (trunk) interworking in the EWSD broadband node bet. broadband and narrowband without additional development, the interworking between N-ISUP in the EWSD and N-ISUP in the system EWSX can be achieved by the described signalling tunnel.

Figure 5 shows an embodiment of the invention wherein an operator (for example, D1) offers inter-network STP services to a number of other network operators (for example, D2, E+, E2). This exemplary embodiment can be employed for certain practically relevant expressions of the incoming linkset/DPC screening (see Q.706, §8).

D1 should thereby be able to interwork with all other networks, D2 with D1 and E+, E+ with D1 and D2, and E2 only with D1. This function can be solved [sic] with a plurality of internal networks connected by tunnels. A separate internal network is thereby allocated to the links to a respective network operator. The individual networks are connected by tunnels in conformity with the allowed signalling relationships. The routing tables in the individual networks are configured in conformity with the allowed relationships.

Alternatively, the traffic between the networks can also be routed via an internal transition network (see the example from Figure 1). This has the advantage that fewer tunnels are potentially required. On the other hand, traffic between the networks then gotta go through two tunnels. [!!!!!!!!!!] It is thereby probable in this

5   embodiment that the internal networks are based on a common external address space, i.e. that there's really only one network externally. In our example, this network would be what is referred to as the network interworking. Seen from the outside, the different internal networks look like separate STP connected to one another according to the rules.

10 Figure 6 shows routing tables belonging to the embodiment in Figure 5.

These routing tables in the four logical internal networks of the signalling point show allowed primary and, potentially, secondary routes to the respectively other networks, whereby these routes are identified by the respectively next point code. The row marked with D2 in the first table, for example, thereby symbolically

15 stands for all destinations (point codes) in D2 that are allowed to be selected proceeding from D1. The direct link(set) to Pc=b is thereby taken as primary route. If this link(set) happens to have failed, the route via PC=c can be taken as secondary route since a route to D2 is also present therefrom. The "external" routes, for example from Pc=a into the D1 network, are not recited here since they're not relevant.

20 The explained embodiments of the invention have shown that an existing mechanism ("multiple networks") can be employed without additional outlay for a number of applications as a result of the inventive configuration.

6

New Patent Claims

1. Signalling means for processing signalling messages, comprising

   --   links via which the signalling means is connected to other signalling

       means,

5   --   at least one signalling system that sends signalling messages to other

       signal means or, respectively, receives signalling messages from these via

       said links,

characterized by

   --   a signalling system that respectively allocates a signalling network identity

10   to a link;

   --   at least one link that is returned in a loop from the signalling point to the

       same signalling point, what is referred to as a loop link, whereby different

       signalling network identities are allocated to the loop link at the output

       and input side by the signalling system.

15   2. Signalling means according to claim 1, characterized in that said signalling system,
with the assistance of a said loop link, communicates signalling messages between
two other signalling systems contained in the signalling means to which is
respectively comprises an interface.

3. Signalling means according to claim 1, characterized in that said signalling system
20   generates internal load for test purposes with the assistance of at least one said loop
link.

4. Signalling means according to claim 1, characterized in that said signalling system
realizes an Internetworking [sic] with other networks with the assistance of a said loop
link.

25   5. Signalling means according to one of the claims 1 through 4, characterized in that
said signalling system is a signalling system according to No. 7 and allocates the same
network identifier (NI) to said loop link at the output and input side.

6. Method for signalling in a signalling means, in accord wherewith

--   a signalling system of the signalling means allocates signalling network identities to the links of the signalling means;

--   the signalling system allocates different signalling network identities at the output and input side to a link, what is referred to as the loop link, that is returned from the signalling means to the same signalling means in a loop.

7. Method according to claim 6, characterized in that a said loop link is employed by said signalling system in order to communicate signalling messages between two further signalling systems of the signalling means to which it comprises a respective interface.

8. Method according to claim 6, characterized in that a said loop link is employed by said signalling system to generate load for test purposes.

9. Method according to claim 6, characterized in that a said loop link is employed by said signalling in order to enable a desired Internetworking [sic] with other networks for a network.

10. Method according to one of the claims 6 through 9, characterized in that a common NI is allocated to a said loop link at the output and input side by said signalling system.

8

Abstract

Signalling System in a Signalling Point

Loops via which a signalling point communicates with itself are advantageous for solving various problems. According to the invention, a loop is enabled by a link that is returned in a loop from a signalling point to the same signalling point and to which two different signalling network identities are allocated at the output and input side.

Figure 5

FIG 1: Interworking via ISUP

FIG 2: Lastgenerierung
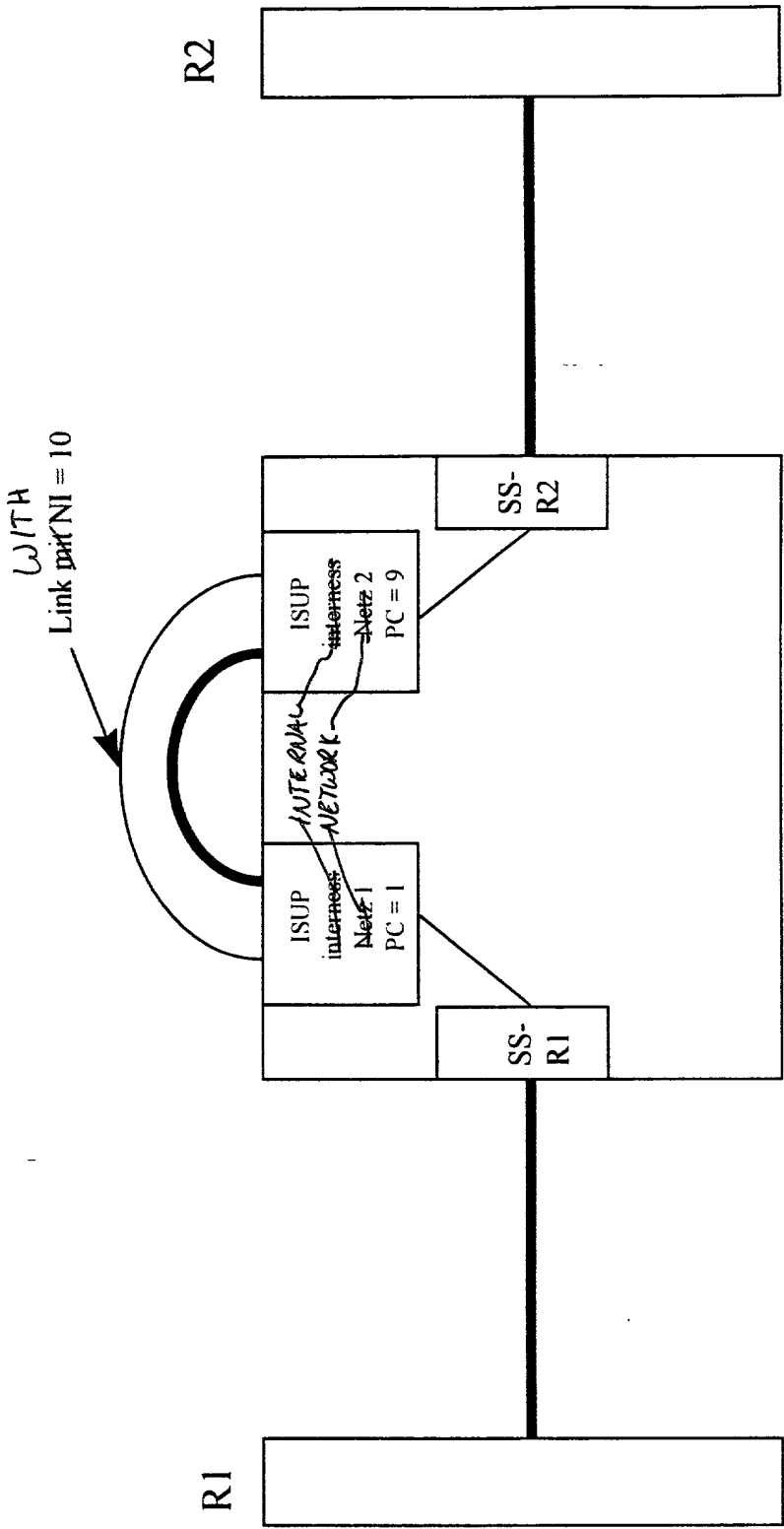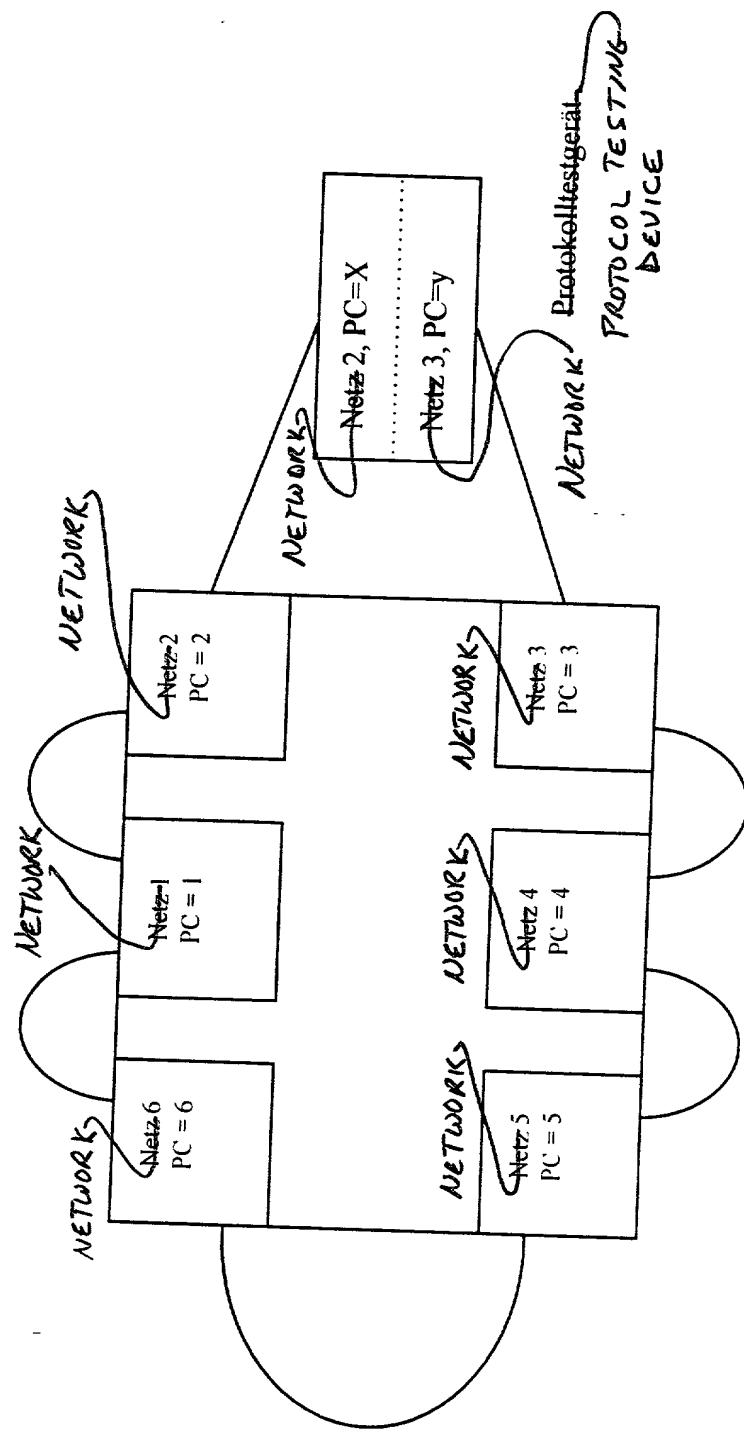(LOAD GENERATOR)

NETWORK

Netz 2
PC = 2

NETWORK

Netz 1
PC = 1

Netz 6
PC = 6

NETWORK

NETWORK

Netz 3
PC = 3

NETWORK

Netz 4
PC = 4

NETWORK

Netz 5
PC = 5

NETWORK

Netz 2, PC=X

Netz 3, PC=y

NETWORK

Protokolltestgerät
PROTOCOL TESTING DEVICE

FIG 3: Routing Tabellen zum Beispiel in FIG 2 (Lastgenerierung) für Pointcode X, 1 und 3

(TABLES / FOR EXAMPLE / LOAD GENERATOR / FOR) POINT CODE (AND)

Routing Tabelle in Pointcode X
(TABLE) (POINT CODE)

Zum Pointcode / To POINT CODE	verwende direkten Linkset zu / Pointcode
X	--
Y	2
1	2
2	2
3	2
4	2
5	2
6	2

EMPLOY DIRECT LINK SET TO POINT CODE

Routing Tabelle in Pointcode 1
(TABLE)

Zum Pointcode / To POINT CODE	verwende direkten Linkset zu / Pointcode
X	2
Y	6
1	--
2	2
3	6
4	6
5	6
6	6

EMPLOY DIRECT LINK SET TO POINT CODE

Routing Tabelle in Pointcode 3
(TABLE) (POINT CODE)

Zum Pointcode / To POINT CODE	verwende direkten Linkset zu / Pointcode
X	4
Y	Y
1	4
2	4
3	--
4	4
5	4
6	4

EMPLOY DIRECT LINK SET TO POINT CODE

FIG 4: Interworking in *kombinierten* Breitband- und Schmalbandsystemen
(EWSD *Broadband* Node)

COMBINED ...... BROAD BAND AND NARROW BAND SYSTEM

BROAD BAND

EWSD LTG LINE

EWSD LTG LINE

EWSD CP/SN

EWSD LTG LINE

EWSD LTG LINE

E1-LIC

SSNC/ EWSX

AUB

Tunnel

09/673905

FIG 5: Incoming Linkset/DPC Screening

D1
D2
E+
E2
~~Alle externen NI~~
~~sind identisch~~
ALL EXTERNAL NI
ARE IDENTICAL
SP ~~mit~~ WITH
ZGS7
INTERNAL ~~Internes~~ D1-~~Netz~~ NETWORK
PC=a
INTERNAL ~~Internes~~ D2-~~Netz~~ NETWORK
PC=b
INTERNAL ~~Internes~~ E+-~~Netz~~ NETWORK
PC=c
INTERNAL ~~Internes~~ E2-~~Netz~~ NETWORK
PC=d
NETWORK TUNNEL ~~Netzwerktunnel~~:
D1-D2
D1-E+
D1-E2
D2-E+

AUSGABE FUER EXAMPLE GDC

FIG 6: Routing (TABLES FOR EXAMPLE) Tabellen zum Beispiel in FIG 5 (Incoming Linkset/DPC Screening) für Tunnel-Routen (FOR) (ROUTES)

D1		
D2	b	c
E+	c	b
E2	d	--

D2		
D1	a	c
E+	c	a
E2	--	--

E+		
D1	a	b
D2	b	a
E2	--	--

E2		
D1	a	--
D2	--	--
E+	--	--

Declaration and Power of Attorney For Patent Application
Erklärung Für Patentanmeldungen Mit Vollmacht
German Language Declaration

Als nachstehend benannter Erfinder erkläre ich hiermit an Eides Statt·

As a below named inventor, I hereby declare that:

dass mein Wohnsitz, meine Postanschrift, und meine Staatsangehörigkeit den im Nachstehenden nach meinem Namen aufgeführten Angaben entsprechen,

My residence, post office address and citizenship are as stated below next to my name,

dass ich, nach bestem Wissen der ursprüngliche, erste und alleinige Erfinder (falls nachstehend nur ein Name angegeben ist) oder ein ursprünglicher, erster und Miterfinder (falls nachstehend mehrere Namen aufgeführt sind) des Gegenstandes bin, für den dieser Antrag gestellt wird und für den ein Patent beantragt wird für die Erfindung mit dem Titel:

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

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(zutreffendes ankreuzen)
[X] hier beigefügt ist.
[ ] am _____ als
PCT internationale Anmeldung
PCT Anmeldungsnummer _____
eingereicht wurde und am _____
abgeändert wurde (falls tatsächlich abgeändert).

_____

_____

_____

the specification of which

(check one)
[ ] is attached hereto.
[ ] was filed on _____ as
PCT international application
PCT Application No. _____
and was amended on _____
       (if applicable)

Ich bestätige hiermit, dass ich den Inhalt der obigen Patentanmeldung einschliesslich der Ansprüche durchgesehen und verstanden habe, die eventuell durch einen Zusatzantrag wie oben erwähnt abgeändert wurde.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims as amended by any amendment referred to above.

Ich erkenne meine Pflicht zur Offenbarung irgendwelcher Informationen, die für die Prüfung der vorliegenden Anmeldung in Einklang mit Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) von Wichtigkeit sind, an

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1 56(a).

Ich beanspruche hiermit ausländische Prioritätsvorteile gemäss Abschnitt 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 119 aller unten angegebenen Auslandsanmeldungen für ein Patent oder eine Erfindersurkunde, und habe auch alle Auslandsanmeldungen für ein Patent oder eine Erfindersurkunde nachstehend gekennzeichnet, die ein Anmeldedatum haben, das vor dem Anmeldedatum der Anmeldung liegt, für die Priorität beansprucht wird.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

German Language Declaration

Prior foreign appplications
Priorität beansprucht

<u>Priority Claimed</u>

<u>98 107 336.4</u>　<u>Germany(EP)</u>　　　　<u>22. April 1998</u>　　　　☒　☐

(Number)　　　(Country)　　　　(Day Month Year Filed)　　　　Yes　No
(Nummer)　　　(Land)　　　　　(Tag Monat Jahr eingereicht)　　　　Ja　Nein

　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　☐　☐

(Number)　　　(Country)　　　　(Day Month Year Filed)　　　　Yes　No
(Nummer)　　　(Land)　　　　　(Tag Monat Jahr eingereicht)　　　　Ja　Nein

　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　☐　☐

(Number)　　　(Country)　　　　(Day Month Year Filed)　　　　Yes　No
(Nummer)　　　(Land)　　　　　(Tag Monat Jahr eingereicht)　　　　Ja　Nein

Ich beanspruche hiermit gemäss Absatz 35 der Zivil-prozessordnung der Vereinigten Staaten, Paragraph 120, den Vorzug aller unten aufgefuhrten Anmel-dungen und falls der Gegenstand aus jedem Anspruch dieser Anmeldung nicht in einer fruheren amerikanischen Patentanmeldung laut dem ersten Paragraphen des Absatzes 35 der Zivilprozeßordnung der Vereinigten Staaten, Paragraph 122 offenbart ist, erkenne ich gemäss Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) meine Pflicht zur Offenbarung von Informationen an, die zwischen dem Anmeldedatum der früheren Anmeldung und dem nationalen oder PCT internationalen Anmeldedatum dieser Anmel-dung bekannt geworden sind.

I hereby claim the benefit under Title 35. United States Code. §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §122, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1 56(a) which occured between the filing date of the prior application and the national or PCT international filing date of this application.

(Application Serial No.)　　　　(Filing Date)　　　　(Status)　　　　　　(Status)
(Anmeldeseriennummer)　　　　(Anmeldedatum)　　　(patentiert, anhängig,　(patented, pending,
　　　　　　　　　　　　　　　　　　　　　　　　aufgegeben)　　　　abandoned)

(Application Serial No.)　　　　(Filing Date)　　　　(Status)　　　　　　(Status)
(Anmeldeseriennummer)　　　　(Anmeldedatum)　　　(patentiert, anhängig,　(patented, pending,
　　　　　　　　　　　　　　　　　　　　　　　　aufgeben)　　　　　abandoned)

Ich erkläre hiermit, dass alle von mir in der vorliegen-den Erklärung gemachten Angaben nach meinem besten Wissen und Gewissen der vollen Wahrheit entsprechen, und dass ich diese eidesstattliche Erklä-rung in Kenntnis dessen abgebe, dass wissentlich und vorsätzlich falsche Angaben gemäss Paragraph 1001, Absatz 18 der Zivilprozessordnung der Vereinigten Staaten von Amerika mit Geldstrafe belegt und/oder Gefängnis bestraft werden koennen, und dass derartig wissentlich und vorsätzlich falsche Angaben die Gül-tigkeit der vorliegenden Patentanmeldung oder eines darauf erteilten Patentes gefährden können.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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German Language Declaration

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</td>
<td>

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. *(list name and registration number)*

</td>
</tr>
</table>

And I hereby appoint

Messrs John D. Simpson (Registration No. 19,842) Lewis T. Steadman (17,074), William C. Stueber (16,453), P. Phillips Connor (19,259), Dennis A. Gross (24,410), Marvin Moody (16,549), Steven H. Noll (28,982), Brett A Valiquet (27,841), Thomas I. Ross (29,275), Kevin W. Guynn (29,927), Edward A. Lehmann (22,312), James D. Hobart (24,149), Robert M. Barrett (30,142), James Van Santen (16,584), J. Arthur Gross (13,615), Richard J. Schwarz (13,472) and Melvin A. Robinson (31,870), David R. Metzger (32,919), John R. Garrett (27,888) all members of the firm of Hill, Steadman & Simpson, A Professional Corporation.

Telefongespräche bitte richten an: *(Name und Telefonnummer)*	Direct Telephone Calls to: *(name and telephone number)*
	312/876-0200 Ext. _____

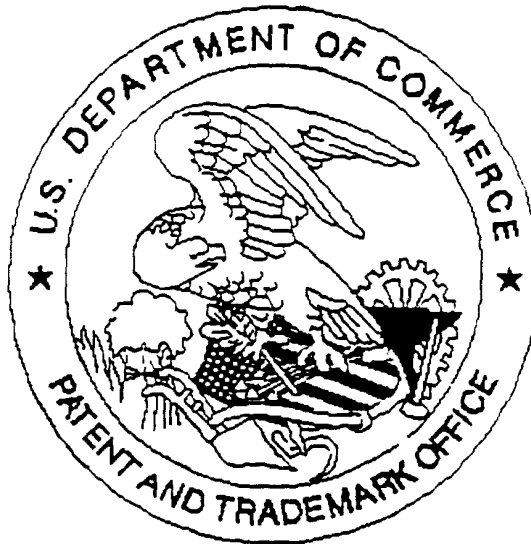Postanschrift: Send Correspondence to:

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Voller Name des zweiten Miterfinders (falls zutreffend):	Full name of second joint inventor, if any:
Unterschrift des Erfinders Datum	Second Inventor's signature Date
Wohnsitz	Residence
Staatsangehörigkeit	Citizenship
Postanschrift	Post Office Address

(Bitte entsprechende Informationen und Unterschriften im Falle von dritten und weiteren Miterfindern angeben).	*(Supply similar information and signature for third and subsequent joint inventors)*

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